

**Amendments to the Claims:**

This listing of claims replaces all prior listings of claims:

**Listing of Claims**

1-77. (Canceled).

78. (Currently Amended) An iterative computer-implemented method for creating and evaluating strategies, comprising:

providing a plurality of modules for the creation and evaluation of strategies, each strategy representing a set of rules specifying a course of action to take for a decision out of one or more decisions, the plurality of modules comprising:

a team development module for developing a list comprising components of a strategy modeling team;

a strategy situation analysis module for framing a decision situation, the framing comprising identifying parameters of the decision, output of team development module being an input of the strategy situation analysis module;

a data request and reception module for designing and executing logistics of specifying, acquiring, and loading data required for the decision and modeling of the strategy, the data request and reception module further constructing a data dictionary characterizing received data, output of the strategy situation analysis module being an input to the data request and reception module;

a data transformation and cleansing module for verifying the data, and transforming the data into a form that is used to build quantitative models used to develop the strategies, output of the data request and reception module being an input to the data transformation and cleansing module;

a decision key and intermediate variable creation module for computing intermediate variables from the data, each intermediate variable of the intermediate variables encapsulating dependent variables, independent variables and decision keys, each intermediate variable containing a model that maps values of nodes it depends on to values it can take on,

each intermediate variable encapsulating a predictive model that with a dependent variable and independent variables, output of the data transformation and cleansing module being an input to the decision key and intermediate variable creation module;

a data exploration module for determining the effectiveness of each intermediate variable of the intermediate variables and each decision key of the decision keys, output of the decision key and intermediate variable creation module being an input to the data exploration module;

a decision model structuring module for formalizing relationships between the one or more decisions, the decision keys, the intermediate variables, value variables representing a function to be maximized, and constraint variables representing limits on the strategies, to obtain a decision model with a specific structure, output of the data exploration module being an input to the decision model structuring module;

a decision model quantification module for encoding information into a decision model, output of the decision model structuring module being an input to the decision model quantification module;

a strategy creation module for determining the strategies that a client can test, output of the decision model quantification module being an input to the strategy creation module; and

a strategy testing module for testing the strategies to guide refinement of strategies and refinement of a decision model and to select a best strategy for deployment, output of the strategy creation module being an input to the strategy testing module;

each module of the plurality of modules occurring in a predetermined sequence of the plurality of modules such that each module occurs once in the predetermined sequence, wherein output of each module of the predetermined sequence is an input of a next module in the predetermined sequence until control is passed to a last sequential module in the predetermined sequence, wherein each module of the predetermined sequence interacts with an expert task manager, wherein said expert task manager provides expert knowledge about strategy modeling processes to the modules; and

executing the modules using at least one data processor forming part of a computer system.

79. (Previously Presented) The iterative method of claim 78, wherein providing said team development module further comprises: said strategy modeling team executing analysis to allow a leader of said strategy modeling team to convince a decision maker to implement a strategy favored by said analysis.

80. (Previously Presented) The iterative method of claim 78, wherein providing said strategy situation analysis module further comprises: identifying the values of the organization; and ensuring that the right decisions and strategies are considered in an analysis.

81-83. (Canceled)

84. (Previously Presented) The iterative method of claim 78, wherein providing said data exploration module further comprises:

providing insight into said data by determining which decision keys are most relevant for predicting said intermediate variables; and

gaining insight into a customer's business and business processes.

85. (Previously Presented) The iterative method of claim 78, wherein providing said decision model structuring module further comprises:

formalizing relationships between decisions, decision keys, intermediate variables, and value by connecting such in a model.

86. (Canceled)

87. (Previously Presented) The iterative method of claim 78, wherein providing said strategy creation module further comprises:

applying optimization methods to a decision model to determine an optimal strategy for a set of cases.

88. (Previously Presented) The iterative method of claim 78, wherein providing said strategy creation module further comprises: evolving using results from a decision model being enriched

and from strategies tested.

89. (Previously Presented) The iterative method of claim 78, wherein providing said strategy testing module further comprise:

providing means for evaluating each strategy based on simulation; and  
providing means for evaluating a strategy in the field.

90. (Previously Presented) The iterative method of claim 78, further comprising: beginning with a simplified value model having less than eight drivers; wherein each of said drivers is modeled by one or two decision keys; initially including no constraints; using said simplified value model for beginning said strategy creation module and said strategy testing module, said strategy creation module and said strategy testing module indicating areas of said decision model where refinement adds particular value; and after interaction between said decision model and strategies is acceptable, iteratively adding details reflecting limitations of a business process.

91. (Previously Presented) The iterative method of claim 78, wherein said team development module comprises a team creation component and a decision quality component.

92. (Previously Presented) The iterative method of claim 78, further comprising: providing a decision quality process for enabling an organization to systematically identify, understand, and track views of quality of decision making.

93. (Previously Presented) The iterative method of claim 78, further comprising: providing any of six dimensions associated with any of six links in a decision quality chain, said any of six links comprising: appropriate frame; creative-feasible alternatives; meaningful-reliable Information; clear values and tradeoffs; logically-correct reasoning; and commitment to action; wherein said chain supports an organization's value.

94. (Previously Presented) The iterative method of claim 78, wherein providing a strategy situation analysis module further comprises: framing a problem by: identifying issues; developing a decision hierarchy; understanding an organization's values; and brainstorming and

clarifying alternatives; further understanding said organization's values by: developing value metrics and prototyping metric results; and planning for data acquisition by: identifying intermediate variables; and developing a plan for assessment; wherein for clarification: optionally returning to said framing a problem step after said further understanding said organization's values step; and optionally returning to said further understanding said organization's values step after said planning for data acquisition step.

95. (Previously Presented) The iterative method of claim 78, wherein providing said data request and reception module further comprises: developing data parameters, including: determining data elements; designing a performance period; determining data records; and constructing an initial data dictionary; determining transfer parameters, including: determining transfer format; and determining transfer method; preparing data, including: assembling transfer data; and transferring data; and loading data on a target system.

96. (Previously Presented) The iterative method of claim 78, wherein providing a data transformation and cleansing module further comprises: validating original data sets, comprising: investigating original data sets; and cleaning original data sets; creating analysis data sets, comprising; and transforming data; and computing additional variables; validating analysis data sets, comprising; transforming data; and computing additional variables; wherein while creating analysis data sets and problems are uncovered in original data sets, then original data sets are further cleaned and retransformed; and wherein while validating analysis data sets and problems in said transformation, or in original data sets, are uncovered, then such tasks are revisited.

97. (Previously Presented) The iterative method of claim 78, wherein providing a decision key and intermediate variable creation module further comprises: first creating dependent variables useful for decision models, comprising: identifying concepts; triaging concepts; and defining dependent variables; and creating independent variables useful for decision models, comprising identifying concepts; triaging concepts; and defining dependent variables; wherein intermediate variables depend on decision keys, other intermediate variables, or decisions; and wherein each intermediate variable encapsulates a predictive model with a dependent variable and independent variables.

98. (Previously Presented) The iterative method of claim 78, wherein providing a data exploration module further comprises: applying basic statistical analysis, comprising: analyzing continuous variables; and analyzing discrete variables; applying variable reduction techniques, comprising: applying human and business judgment; and applying computational methods; applying advanced statistical analysis; verifying results; and presenting said results.

99. (Previously Presented) The iterative method of claim 78, wherein providing a decision model structuring module further comprises: conceptualizing by selecting intermediate variables that drive value; building coarse models of intermediate variables; and verifying constraints; and drawing a decision model structure; wherein said conceptualizing is iteratively available for use after said drawing.

100. (Previously Presented) The iterative method of claim 78, wherein providing a decision model quantification module further comprises: modeling intermediate variables; filling in nodes with models, functions, and/or constants; and validating said decision model; wherein said modeling step is iteratively available from said filling in step, and wherein said filling in step is iteratively available from said validating said decision model step.

101. (Previously Presented) The iterative method of claim 78, further comprising: providing a score tuner component for automating decision model updating and reporting, said score tuner component comprising any of: data awareness capability; triggering rules; model history retention; self-guided model development; connection to a decision engine; and execution and analytic audit trails; wherein when a tuning run is triggered, results are reviewed and either accepted and an update is deployed, or rejected.

102. (Previously Presented) The iterative method of claim 78, wherein providing a strategy creation module further comprises: performing model optimization, comprising: identifying metric variables; determining optimization parameters; and running optimization; analyzing optimization results, comprising viewing optimization results; and performing sensitivity analysis on constraints; and developing strategies, comprising: building strategies; and refining

strategies; wherein the performing model optimization step and the analyzing optimization results step are available to be used iteratively from either the analyzing optimization results step or the developing strategies step.

103. (Previously Presented) The iterative method of claim 78, further comprising: providing a non-linear constrained optimization tool for improving test designs and optimizing strategies.

104. (Previously Presented) The iterative method of claim 78, wherein providing a strategy testing module further comprises: testing strategies, comprising: performing strategy simulation; and performing field testing; evaluating strategies; and performing active data collection; wherein said testing strategies step is available for being used iteratively from said evaluating strategies step.

105. (Previously Presented) An apparatus for iteratively creating and evaluating strategies in an iterative, comprising:

one or more computing systems for providing a plurality of modules for the creation and evaluation of strategies, each strategy representing a set of rules specifying a course of action to take for a decision out of one or more decisions, the plurality of modules comprising:

a team development module for developing a list comprising components of a strategy modeling team;

a strategy situation analysis module for framing a decision situation, the framing comprising identifying parameters of the decision;

a data request and reception module for designing and executing logistics of specifying, acquiring, and loading data required for the decision and modeling of the strategy, the data request and reception module further constructing a data dictionary characterizing received data;

a data transformation and cleansing module for verifying the data, and transforming the data into a form that is used to build quantitative models used to develop the strategies;

a decision key and intermediate variable creation module for computing intermediate variables from the data, each intermediate variable of the intermediate variables

encapsulating dependent variables, independent variables and decision keys, each intermediate variable containing a model that maps values of nodes it depends on to values it can take on, each intermediate variable encapsulating a predictive model that with a dependent variable and independent variables;

a data exploration module for determining the effectiveness of each intermediate variable of the intermediate variables and each decision key of the decision keys;

a decision model structuring module for formalizing relationships between the one or more decisions, the decision keys, the intermediate variables, value variables representing a function to be maximized, and constraint variables representing limits on the strategies, to obtain a decision model with a specific structure;

a decision model quantification module for encoding information into a decision model;

a strategy creation module for determining the strategies that a client can test; and

a strategy testing module for testing the strategies to guide refinement of strategies and refinement of a decision model and to select a best strategy for deployment;

wherein each module of the plurality of modules occurs once in a predetermined sequence of the plurality of modules, wherein output of each module of the predetermined sequence is an input of a next module in the predetermined sequence until control is passed to a last sequential module in the predetermined sequence, wherein each module of the predetermined sequence interacts with an expert task manager, wherein said expert task manager provides expert knowledge about strategy modeling processes to the modules.

106. (Previously Presented) The apparatus of claim 105, said team development module further comprising: means for said strategy modeling team executing analysis to allow a leader of said strategy modeling team to convince a decision maker to implement a strategy favored by said analysis.

107. (Previously Presented) The apparatus of claim 105, said strategy situation analysis module further comprising: means for identifying the values of the organization; and means for ensuring that the right decisions and strategies considered in an analysis.



108-110. (Canceled)

111. (Previously Presented) The apparatus of claim 105, said data exploration module further comprising: means for providing insight into said data by determining which decision keys are most relevant for predicting said intermediate variables; and means for gaining insight into a customer's business and business processes.

112. (Previously Presented) The apparatus of claim 105, further comprising: means for said decision model structuring module formalizing relationships between decisions, decision keys, intermediate variables, and value by connecting such in a model.

113. (Canceled)

114. (Previously Presented) The apparatus of claim 105, further comprising: means for said strategy creation module applying optimization methods to a decision model to determine an optimal strategy for a set of cases.

115. (Previously Presented) The apparatus of claim 105, further comprising: means for said strategy creation module evolving using results from a decision model being enriched and from strategies tested.

116. (Previously Presented) The apparatus of claim 105, further comprising: means for said strategy testing module: providing means for evaluating each strategy based on simulation; and providing means for evaluating a strategy in the field.

117. (Previously Presented) The apparatus of claim 105, further comprising: means for beginning with a simplified value model having less than eight drivers wherein each of said drivers is modeled by one or two decision keys; means for initially including no constraints; means for using said simplified value model for beginning said strategy creation module and said strategy testing module, said strategy creation module and said strategy testing module indicating areas of said decision model where refinement adds particular value; and means for after

interaction between said decision model and strategies is acceptable, iteratively adding details reflecting limitations of a business process.

118. (Previously Presented) The apparatus of claim 105, wherein said team development module comprises: a team creation component; and a decision quality component.

119. (Previously Presented) The apparatus of claim 105, further comprising: means for providing a decision quality process for enabling an organization to systematically identify, understand, and track views of quality of decision making.

120. (Previously Presented) The apparatus of claim 105, further comprising: means for providing any of six dimensions associated with any of six links in a decision quality chain, said six links comprising: appropriate frame; creative-feasible alternatives; meaningful-reliable Information; clear values and tradeoffs; logically-correct reasoning; and commitment to action; wherein said chain supports an organization's value.

121. (Previously Presented) The apparatus of claim 105, said means for providing a strategy situation analysis module further comprises: means for framing a problem by: identifying issues; developing a decision hierarchy; understanding an organization's values; and brainstorming and clarifying alternatives; means for further understanding said organization's values by developing value metrics and prototyping metric results; and means for planning for data acquisition by: identifying intermediate variables; and developing a plan for assessment; wherein for clarification: optional means for returning to said framing a problem step after said further understanding said organization's values step; and optional means for returning to said further understanding said organization's values step after said planning for data acquisition step.

122. (Previously Presented) The apparatus of claim 105, said data request and reception module further comprising: means for developing data parameters, comprising any of: determining data elements; designing a performance period; determining data records; and constructing an initial data dictionary; means for determining transfer parameters, comprising:

determining transfer format; and determining transfer method; means for preparing data, comprising: assembling transfer data; and transferring data; and means for loading data on a target system.

123. (Previously Presented) The apparatus of claim 105, said means for providing a data transformation and cleansing module further comprising: means for validating original data sets, comprising: investigating original data sets; and cleaning original data sets; means for creating analysis data sets, comprising: and transforming data; and computing additional variables; means for validating analysis data sets, comprising: transforming data; and computing additional variables; wherein while creating analysis data sets and problems are uncovered in original data sets, then original data sets are further cleaned and retransformed; and wherein while validating analysis data sets and problems in said transformation, or in original data sets, are uncovered, then such tasks are revisited.

124. (Previously Presented) The apparatus of claim 105, said means for providing a decision key and intermediate variable creation module further comprising: means for first creating dependent variables useful for decision models, comprising: identifying concepts; triaging concepts; and defining dependent variables; and means for creating independent variables useful for decision models, comprising identifying concepts; triaging concepts; and defining dependent variables; wherein intermediate variables depend on decision keys, other intermediate variables, or decisions; and wherein each intermediate variable encapsulates a predictive model with a dependent variable and independent variables.

125. (Previously Presented) The apparatus of claim 105, said means for providing a data exploration module further comprising: means for applying basic statistical analysis, comprising: analyzing continuous variables; and analyzing discrete variables; means for applying variable reduction techniques, comprising: applying human and business judgment; and applying computational methods; means for applying advanced statistical analysis; verifying results; and presenting said results.

126. (Previously Presented) The apparatus of claim 105, said means for providing a decision

model structuring module further comprising: means for conceptualizing, comprising : selecting intermediate variables that drive value; building coarse models of intermediate variables; and verifying constraints; and means for drawing a decision model structure; wherein said conceptualizing step is iteratively available for use after said drawing step.

127. (Previously Presented) The apparatus of claim 105, said means for providing a decision model quantification module further comprising: means for modeling intermediate variables; means for filling in nodes with models, functions, and/or constants; and means for validating said decision model; wherein said modeling step is iteratively available from said filling in step, and wherein said filling in step is iteratively available from said validating said decision model step.

128. (Previously Presented) The apparatus of claim 105, further comprising: means for providing a score tuner component for automating decision model updating and reporting, said score tuner component comprising any of: data awareness capability; triggering rules; model history retention; self-guided model development; connection to a decision engine; and execution and analytic audit trails; wherein when a tuning run is triggered, results are reviewed and either accepted and an update is deployed, or rejected.

129. (Previously Presented) The apparatus of claim 105, said means for providing a strategy creation module further comprising: means for performing model optimization, comprising: identifying metric variables; determining optimization parameters; and running optimization; means for analyzing optimization results, comprising viewing optimization results; and performing sensitivity analysis on constraints; and means for developing strategies, comprising: building strategies; and refining strategies; wherein the performing model optimization step and the analyzing optimization results step are available to be used iteratively from either the analyzing optimization results step or the developing strategies step.

130. (Previously Presented) The apparatus of claim 105, further comprising: a non-linear constrained optimization tool for improving test designs and optimizing strategies.

131. (Previously Presented) The apparatus of claim 105, said means for providing a strategy

testing module further comprising: testing strategies, comprising: performing strategy simulation; and performing field testing; and evaluating strategies; and performing active data collection; wherein said testing strategies step is available for being used iteratively from said evaluating strategies step.

132. (Previously Presented) A system for the creation and evaluation of strategies, each strategy representing a set of rules specifying a course of action to take for a decision out of one or more decisions, the system comprising a plurality of sequential modules, the plurality of sequential modules comprising:

- team development module for developing a list comprising components of a strategy modeling team;

- strategy situation analysis module for framing a decision situation;

- data request and reception module for designing and executing logistics of specifying, acquiring, and loading data required for the decision and modeling of the strategy, the data request and reception module further constructing a data dictionary characterizing received data;

- data transformation and cleansing module for verifying the data, and transforming the data into a form that is used to build quantitative models used to develop the strategies;

- a decision key and intermediate variable creation module for computing intermediate variables from the data, each intermediate variable of the intermediate variables encapsulating dependent variables, independent variables and decision keys, each intermediate variable containing a model that maps values of nodes it depends on to values it can take on, each intermediate variable encapsulating a predictive model that with a dependent variable and independent variables;

- data exploration module for determining the effectiveness of each intermediate variable of the intermediate variables and each decision key of the decision keys;

- decision model structuring module for formalizing relationships between the one or more decisions, the decision keys, the intermediate variables, value variables representing a function to be maximized, and constraint variables representing limits on the strategies, to obtain a decision model with a specific structure;

- decision model quantification module for encoding information into a decision model;

- strategy creation module for determining strategies that a client can test; and

a strategy testing module for testing strategies to guide refinement of strategies and refinement of a decision model and to select a best strategy for deployment,

wherein each module of the plurality of modules occurs once in a predetermined sequence of the plurality of modules, output of each module of the predetermined sequence being an input of a next module in the predetermined sequence until control is passed to a last sequential module in the predetermined sequence, the last sequential module being the strategy testing module, wherein each module of the plurality of sequential modules is implemented by at least one data processor of one or more computing systems.

133. (Previously Presented) The system of claim 132, wherein the team development module is configured to:

output the developed list comprising the components of the strategy modeling team; and  
pass control to the strategy situation analysis module such that the developed list comprising the components is an input to the strategy situation analysis module.

134. (Previously Presented) The system of claim 133, wherein the strategy situation analysis module is configured to:

output, based on the framing of the decision situation, a hierarchy of the decisions; and  
pass control to the data request and reception module such that the hierarchy is an input to the data request and reception module.

135. (Previously Presented) The system of claim 134, wherein the data request and reception module is configured to:

output, based on the designing and the execution of the logistics, a communication reporting a status of a request for the data; and  
pass control to the data transformation and cleansing module such that the communication is an input to the data transformation and cleansing module.

136. (Previously Presented) The system of claim 135, wherein the data transformation and cleansing module is configured to:

output, based on the transforming of the data, a report on the data that is transformed into a form that is used to build quantitative models used to develop the strategies; and

pass control to the decision key and intermediate variable creation module such that the report on the transformed data is an input to the decision key and intermediate variable creation module.

137. (Previously Presented) The system of claim 136, wherein the decision key and intermediate variable creation module is configured to:

output, based on the computing of the intermediate variables, a list of the intermediate variables; and

pass control to the data exploration module such that the list of the intermediate variables is an input to the data exploration module.

138. (Previously Presented) The system of claim 137, wherein the data exploration module is configured to:

output, based on the determining of the effectiveness of each intermediate variable, a report regarding the usefulness of the decision keys for predicting the intermediate variables that are uncertain; and

pass control to the decision model structuring module such that the report regarding the usefulness of the decision keys is an input to the decision model structuring module.

139. (Previously Presented) The system of claim 138, wherein the decision model structuring module is configured to:

output, based on the formalizing of the relationships between the one or more decisions, a report on the structure of the decision model; and

pass control to the decision model quantification module such that the report on the structure of the decision model is an input to the decision model quantification module.

140. (Previously Presented) The system of claim 139, wherein the decision model quantification module is configured to:

output, based on the encoding of the information, a report summarizing assumptions made during modeling using the decision model; and

pass control to the strategy creation module such that the report summarizing the assumptions is an input to the strategy creation module.

141. (Previously Presented) The system of claim 140, wherein the strategy creation module is configured to:

output, based on the determining of the strategies that can be tested by the client, a report on the strategies considered for the decision model; and

pass control to the strategy testing module such that the report on the strategies is an input to the strategy testing module.

142. (Previously Presented) The system of claim 141, wherein the strategy testing module is configured to:

output, based on the testing of the strategies a report that compares the strategies considered for the decision model to select the best strategy out of the considered strategies such that the report comparing the strategies is an output of the plurality of sequential modules.